

## ABSTRACT OF THE INVENTION

The present invention relates to a system and methodology facilitating material-driven processing in an industrial controller environment. Various models supported by database objects are provided to automatically and dynamically map inventory

5 systems/processes to control systems/process such as in batch or recipe operations. A material model is provided that tracks to an inventory database and includes such aspects as defining material types and containers to house such materials. An area model maps the material model to possible units and equipment modules to process the materials.

10 These models include phased-based parameters that define amounts of material that flow into and out of a determined area for processing the materials. Before, during and/or after automated manufacturing operations, object binding operations occur between material-based servers associated with an inventory system and batch servers associated with a process-control system. Such binding includes Just-In-Time or on-demand binding at run

15 time, and relates material requirements of a recipe (or batch) to the units and equipment that are available to produce the recipe.